

*Six(6) Pages in this Fax*

**PATENT**  
Attorney Docket No. 63131

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:  
MICHAELI ET AL.

Application No. 09/845,606

Confirmation No. 2587

Filed: April 28, 2001

For: METHOD AND APPARATUS FOR A  
DATA STRUCTURE COMPRISING A  
HIERARCHY OF QUEUES OR LINKED  
LIST DATA STRUCTURES

Group Art Unit: 2126

Examiner: ZHEN, LI B

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*Kirk D Williams*  
Kirk D. Williams, Esq. 11/23/04

**REMARKS B**

Commissioner for Patents  
Alexandria, VA 22313-1450

Dear Sir:

The Office action dated August 24, 2004, and the references cited have been fully considered. In response, please consider the following remarks. Reconsideration and/or further prosecution of the application is respectfully requested.

Remarks begin on page 2 of this paper.

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### REMARKS

The Office action dated August 24, 2004, and the references cited have been fully considered. In response, please consider the following remarks. Reconsideration and/or further prosecution of the application is respectfully requested.

The following remarks are numbered to reference the same numbered paragraphs of the Office Action to which they are directed.

**Paragraphs 5-15.** Claims 1-8 and 13-32 stand rejected under 35 USC § 103(a) as being anticipated by Klausmeier et al., US Patent 5,838,915, in view of Sherer et al., US Patent 5,875,176.

Applicants respectfully disagree with the Office's interpretation of Klausmeier et al. in combination with Sherer et al., and traverse the 35 USC § 103(a) rejections of the pending claims. The Office action fails to establish a *prima facie* case of obviousness as Klausmeier et al., alone or in combination with Sherer et al., neither teaches nor suggests all the claim elements and limitations as required by the MPEP. The burden is on the Office Action to establish a *prima facie* case of obviousness, which has not been done as the MPEP requires, *inter alia*, that:

"the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure."

MPEP § 706.02(j) (*citing In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991))(emphasis added).

Moreover, to be inherent means it *must* occur. The fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. MPEP § 2112 (*emphasis in original*).

Neither Klausmeier et al. and Sherer et al. teach distributing a plurality of items to a plurality of sub-data structures in an order and receiving items from the sub-data structures in the order. The Office action admits in paragraph 6 that Klausmeier does not teach this, and the

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Office relies on Sherer et al, col. 5, lines 30-45 for this teaching. However, applicants respectfully submit that this is not a teaching of Sherer et al. (as it uses destination address based queuing), and in fact, the cited portions of Sherer et al. relied upon by the Office for these claim limitations and the motivation for combination of references teach away from the recited claim limitations.

Sherer et al, col. 5, lines 30-45, states that "all packets from the same source address destined for the same destination are placed in a queue" and "associated with each destination address is essentially a FIFO queue of packets addressed to that particular device." Hence, the use of the headings of "Destination Address Based Ordering: Example 1" and "Destination Address Based Ordering: Example 2". Col. 5., lines 30 and 58. Moreover, the subsequent few lines after the citation of Sherer et al. relied upon by the Office action gives an example and explains the teaching relied upon by the Office. In this example, Sherer et al. shows that the packets are submitted in the order A1, A2, B1, C1, C2, C3, A3, B2, B3 and then transmitted in the order A1, B1, C1, A2, B2, C2, A3, B3, C3. Col. 5, lines 45-52. These are not the same order, and thus this neither teaches nor suggest that recited in claims (as they recite distributed in "an order" and received in "the order"). Moreover, in the second technique described in Sherer et al., these orders are not the same (i.e., A1, A2, B1, C1, C2, C3, A3, B2, B3 and A1, B1, C1, A2, C2, B2, C3, A3, B3). Col. 6, lines 5-10. Also, the claims of Sherer et al. further explain its teachings, especially claim 4 and claim 5.

Sherer et al. attempts "... to improve network parallelism at layer 2 and below by *reordering packets within the adaptor hardware* and driver, transparently to the higher layer protocols requesting transmission of those packets, in order to distribute packets to as many different ultimate destinations as possible. This avoids the transmitter waiting for slower network paths. This technique also can reduce bottlenecks developing further down the transmission stream in network ISs. According to the invention, this redistribution is accomplished while still preserving the order of packets sent to any particular destination from any particular source. Thus, the invention effectively spreads packets over a number of

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destinations at layer 2, without the need for modifying higher layer protocols." Col. 4, lines 47-61 (*emphasis added*). Thus, Sherer et al. teaches placing packets in different queues in an order and retrieving them from the queues in a different order so as to avoid congestion and to reduce bottlenecks. Note, this citation includes *the entire paragraph* of that relied on in the Office action for a motivation to combine the two cited references, and thus provides a better context and understanding of the teachings of Sherer et al. Moreover, even if this is a proper motivation of a combination of the references, the resulting system neither teaches nor suggests that recited in the claims.

Similarly, Klausmeier et al. maintains the order of cells belonging to a particular connection in the same order by having a separate queue for each connection, but neither teaches nor suggests maintaining the same ordering of cells as they are distributed to the different queues nor retrieving cells from the queues in the same order that they were distributed to the queues.

In contrast to the teachings of Sherer et al. (as well as Klausmeier et al. as discussed in Amendment A, the entirety of which is hereby incorporated by reference), one aspect of the present application as claimed is to distribute data items across multiple sub-data structures and to retrieve them from these multiple sub-data structures in the order in which they were received and placed in the multiple sub-data structures. Thus, multiple, slower operating data structures can be used to support a stream of data of a higher rate.

For at least these reasons, independent claim 1 and its dependent claims 2-8 and 29-30, and independent claim 13 and its dependent claims 14-20 and 31-32 are believed to be allowable.

**Paragraphs 16 and 17.** Claims 21, 22, 25 and 26 stand rejected, including that based on the same rationale previously traversed, and therefore claims 21, 22, 25 and 26 are believed to be allowable for at least the same reasons presented herein. Moreover, Applicants respectfully further traverse the *sending* of packets in a round-robin fashion by Sherer et al. for the teaching of "said distributing adds no two consecutive elements of the plurality of elements in the order to

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the same one of the linked list data structures" as Sherer et al. teaches removing items from a queue in a different order to which they were placed in the queue. Thus, the order packets are sent does not define the order packets are placed in its queues.

**Paragraphs 18 and 19.** Claims 23, 24, 27 and 28 stand rejected, including that based on the same rationale previously traversed, and therefore claims 23, 24, 27 and 28 are believed to be allowable for at least the same reasons presented herein. Moreover, the Office action fails to address *the entire* limitation of "advancing the currently selected one of the plurality of sub-data structures to which to add information to a next one of the plurality of sub-data structures to which to add information in a predetermined order *independent of said received information.*" Moreover, both Sherer et al. and Klausmeier et al. teach placing items in queues selected based on the contents of the packet (e.g., the connection to which it belongs or its destination), and thus the next sub-data structure selected is not *independent of said received information.*

**Final Remarks.** In view of the above remarks and for at least the reasons presented herein, all pending claims are believed to be allowable over the prior art of record, the application is considered in good and proper form for allowance, and the Office is respectfully requested to issue a timely Notice of allowance in this case. Applicant requests any and all rejections and/or objections be withdrawn. If, in the opinion of the Office, a telephone conference would expedite the prosecution of the subject application, the Office is invited to call the undersigned attorney.

If the Office action complies with MPEP § 706 and specifically 37 CFR 1.104(c)(2), then Sherer et al. and Klausmeier et al. are the best references available. As these references neither teach nor suggest all the claim elements and limitations as required by the MPEP, then all pending claims are believed to be allowable, and applicants request the claims be allowed and the application pass to issuance.

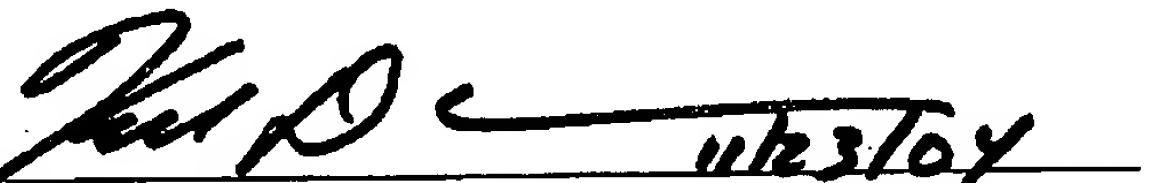
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Applicants believe no extension of time is required, but hereby petitions any such extension of time required and authorizes the Commissioner to charge any associated fees to Deposit Account No. 501430. Moreover, the Commissioner is hereby generally authorized under 37 C.F.R. § 1.136(a)(3) to treat this communication or any future communication in this or any related application filed pursuant to 37 C.F.R. § 1.53 requiring an extension of time as incorporating a request therefore, and the Commissioner is hereby specifically authorized to charge Deposit Account No. 501430 for any fee that may be due in connection with such a request for an extension of time. Moreover, the Commissioner is hereby authorized to charge payment of any fee due any under 37 C.F.R. §§ 1.16 and § 1.17 associated with this communication or any future communication in this or any related application filed pursuant to 37 C.F.R. § 1.53 or credit any overpayment to Deposit Account No. 501430.

Respectfully submitted,  
The Law Office of Kirk D. Williams

Date: November 23, 2004

By



Kirk D. Williams, Reg. No. 42,229  
One of the Attorneys for Applicant  
CUSTOMER NUMBER 26327  
The Law Office of Kirk D. Williams  
1234 S. OGDEN ST., Denver, CO 80210  
303-282-0151 (telephone), 303-778-0748 (facsimile)